



The defendants hereby respectfully move for an order *in limine* precluding any plaintiffs from offering any evidence, photographic or otherwise, regarding a piece of masking tape, or making any reference to the piece of masking tape at any time in the trial of this matter, that was allegedly found on an exemplar Beech 1900D during an aircraft inspection in this case.

In the plaintiffs' reply papers to Raytheon's motion for summary judgment, the plaintiffs provided the court with the plaintiffs' "Top Ten Factual Issues." Number three in the plaintiffs' Top Ten Factual Issues is an enlargement of the piece of masking tape that appears in a photograph of pulleys and cables and may say "upper pulley TAPE is Right." The plaintiffs' human factors expert witness, Mr. Michael E. Maddox, Ph.D, references this piece of tape on numerous occasions in his report and deposition placing significant relevance on the piece of masking tape. In his opinion, the unidentified piece of masking tape is, "from a human factors perspective...a 'smoking gun'."

In his expert disclosures Mr. Maddox states that he took photographs of the exemplar aircraft and trim tab components and the alleged piece of masking tape: "clearly show[s] a piece of masking tape that had apparently been placed there during prior maintenance to assist Raytheon's own maintenance mechanics in understanding the routing of the pitch trim control cable...This type of reminder is typical of *ad hoc* information reminders placed on or near equipment by people who find the configuration of the equipment confusing." Mr. Maddox acknowledges in his deposition, as he must, that he does not know who wrote the notation, why it was written, when it was written or by whom it was written. He can only opine on what he "think[s] that mean[s]." See deposition of Michael E. Maddox, Ph.D. at pp. 208-215, attached as Ex. 1. Further, Mr. Maddox did his inspection of the exemplar Beech 1900D in 2006, three

years after the accident, and has no way of knowing whether this masking tape note was done before the accident or years later.

The masking tape note is a writing upon which the plaintiffs intend to offer to prove the matter asserted, and, as such, is hearsay in its most basic form. Worse, it is hearsay for which there is no known declarant, no evidence as to when it was asserted and no evidence as to the motivation for whoever may be responsible for its presence or its content. As such, the masking tape notations cannot be admissible and plaintiffs should be precluded from introducing such evidence at trial. Fed. R. Evid. 801.

WHEREFORE, the defendants respectfully request that this Court enter an order *in limine* precluding the plaintiffs from introducing the masking tape notations at trial.

RAYTHEON DEFENDANTS,  
By Counsel,

/s/ Peter C. Knight

I hereby certify that this document(s) filed through the ECF system will be sent electronically to the registered participants as identified on the Notice of Electronic Filing (NEF) and paper copies will be sent to those indicated as non registered participants on January 26, 2007.

/s/ Peter C. Knight

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# **EXHIBIT 1**

1 UNITED STATES DISTRICT COURT  
2 FOR THE DISTRICT OF MASSACHUSETTS

3 YISEL DEAN, et al.,

4 Plaintiffs,

5 vs.

Case No. 05-CV-10155-PBS

6 RAYTHEON COMPANY, a Delaware  
7 Corporation, RAYTHEON AIRCRAFT  
8 HOLDINGS, INC., a Delaware  
9 Corporation, RAYTHEON AIRCRAFT  
COMPANY, a Kansas Corporation,  
RAYTHEON AIRCRAFT CREDIT  
CORPORATION, a Kansas Corporation,

10 Defendants.  
11

12 LISA A. WEILER, et al.,

13 Plaintiffs,

14 vs.

Case No. 05-CV-10364-PBS

15 RAYTHEON COMPANY, a Delaware  
16 Corporation, RAYTHEON AIRCRAFT  
17 HOLDINGS, INC., a Delaware  
18 Corporation, RAYTHEON AIRCRAFT  
COMPANY, a Kansas Corporation,  
RAYTHEON AIRCRAFT CREDIT  
CORPORATION, a Kansas Corporation,

19 Defendants.  
20

21 DEPOSITION OF: MICHAEL E. MADDOX, Ph.D., CHFP

22 DATE: October 4, 2006

23 TIME: 8:59 a.m.  
24  
25

1 Q. Do you have a criticism there, or is  
2 that an observation that it's hard to see?

3 A. It's an observation that it's difficult  
4 to see. And so when things are difficult to see,  
5 the odds of not seeing something improper has  
6 increased. Also --

7 Q. But you're not criticizing Raytheon for  
8 that design, are you?

9 MS. SCHIAVO: Objection.

10 THE WITNESS: It's part of Raytheon's  
11 design, so to the extent that it's hard to see  
12 stuff, that's part of Raytheon's design.

13 BY MR. JONES:

14 Q. What I'm getting at, though, is whether  
15 you're going to be presenting an opinion in this  
16 case that there is another alternative design, as  
17 it relates to access or routing of this cable, that  
18 should have been employed in the design of this  
19 aircraft.

20 A. I'm not going to be testifying to that,  
21 no.

22 Q. That's beyond your expertise, isn't it?

23 A. That is correct. There is also a  
24 photograph that figures prominently in this area.  
25 One of the photographs I took shows an ad hoc label

1 that was placed in this area by some -- presumably  
2 some maintenance technician in the past attempting  
3 to clarify the routing of the control cables in  
4 this area.

5 Q. Now, you mention that on page 20 of  
6 your report?

7 A. That's correct.

8 Q. Do you have that picture?

9 A. Sure. It's also on the DVD, but I can  
10 show it to you. This is a better view of it.  
11 Okay, here is the other view. This is the  
12 zoomed-out version. This is looking up into the  
13 pedestal.

14 Q. From underneath the belly of the  
15 aircraft?

16 A. Correct. Correct. This is a piece of  
17 tape that's been placed there presumably during  
18 some prior maintenance.

19 Q. You don't know why or when it was  
20 placed there, though, right?

21 A. I do not. If I zoom in on it --

22 Q. Let's try, for the record, to give this  
23 some sort of a name or way to identify it. Is it  
24 numbered somehow?

25 A. Yes. In fact, it has a title. It's

1 called looking up into pedestal four.

2 Q. Does it have a suffix? Is it a --

3 A. A JPEG file.

4 Q. It's amongst the photographs that are  
5 on the DVD that you're producing here today?

6 A. Correct. If I zoom in on it, the tape  
7 says: Upper pulley, tape is right.

8 Q. Is right?

9 A. I believe that's what that says.

10 Q. What does that mean or what do you  
11 think that means?

12 A. What I think that means is somebody was  
13 trying to keep straight which pulley which cable  
14 went through. Notice there is a set of pulleys.  
15 These two pulleys shown in the picture are for the  
16 pitch trim control cables. This is where they come  
17 down and then go across the cockpit floor to the  
18 left side --

19 Q. Which pulley is that on Detail F of  
20 Figure 202 on Exhibit 98?

21 A. It's this one right here. (Indicating)

22 Q. It's the fourth pulley?

23 A. It's either the fourth or the third. I  
24 can't really tell, but it looks like one that  
25 goes -- as you can see -- well, me zoom out a



1 little bit. Actually, I can show you another  
2 picture that will make it clearer. What I'm  
3 looking for is the bottom of this pulley. Here you  
4 go.

5 Q. Let's first identify the name of the  
6 file.

7 A. This is looking up into pedestal two  
8 dot JPG.

9 Q. Okay. We see two sets of pulleys?

10 A. Right. See where they're crossed,  
11 these cables change planes?

12 Q. They're not crossed, they just change  
13 planes?

14 A. They just twist from that upper pulley.  
15 They twist down here.

16 Q. It's a 90 degree plane change?

17 A. Right, and then they shoot through a  
18 little bulkhead area here towards the left side of  
19 the aircraft.

20 Q. And you're saying that's the third or  
21 the fourth pulley set?

22 A. Yeah. I can't really tell from this  
23 diagram which one it is.

24 Q. But it's either the one you've circled  
25 or the one on either side of it?

1           A.    Yeah.  Because here, once it passes  
2   this pulley, it actually has a straight shot down  
3   the left side of the aircraft.  So for all I know,  
4   it could actually be this one and there could be  
5   another pulley in there.  As you can see, there is  
6   very limited visual access past this pulley.  There  
7   is a bulkhead in the way.  There is a piece of  
8   metal in the way, so I don't know what's on the  
9   other side of this thing.

10           Q.   So what do you take that tape to mean?

11           A.   I take that tape to mean that it was  
12   put there by a mechanic to help them keep straight  
13   which cable went into which pulley.  I think what  
14   they did was they taped a cable and they said that  
15   the -- coming off the upper pulley there is a taped  
16   cable, there is a taped cable with some tape on it  
17   and it goes through the right pulley here.  I think  
18   that's what they mean.  I'm interpreting for them.

19                   But this type of what I would call a  
20   job aid is fairly classic in the human factors  
21   world.  When we go into a situation to examine or  
22   evaluate a system or a product, the very first  
23   thing we look for are sticky notes or download  
24   labels or taped messages or marks where somebody  
25   wrote on it with a pen or something like that

1 because it's ambiguous; they don't have the  
2 information that they need in the world. In other  
3 words, there is not enough information just by  
4 looking at this, perhaps the procedure is not  
5 clear, so they make a note for themselves to help  
6 them out.

7 Q. So do you read that to implicate a  
8 human factors problem originating from the design  
9 of the aircraft?

10 A. From both the design of the aircraft  
11 and the instructions. It's probably a combination  
12 of both, that there is not enough information  
13 either in their view of this pulley and cable  
14 system or in the procedures themselves to make it  
15 unambiguous what they should do with this cable,  
16 how they should route the cable. So they have done  
17 two things: Tape is right. Either they have done  
18 something to code one of the cables, they have put  
19 a piece of tape on it or they've done something  
20 else and then they've written themselves a note to  
21 let them know which pulley it goes through.

22 Q. But you don't know what the mechanics  
23 were doing --

24 MS. SCHIAVO: Objection.

25  
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1 BY MR. JONES:

2 Q. -- when this was created?

3 MS. SCHIAVO: Objection.

4 THE WITNESS: I can't say for sure.

5 The fact that the tape is there is a telltale sign  
6 that they needed more information and they wrote  
7 themselves a note.

8 BY MR. JONES:

9 Q. And you're assuming it was mechanics  
10 who did that?

11 A. I'm assuming it was. I don't know who  
12 else would be in this area to do that.

13 Actually, this is very difficult to  
14 access, there is very little room in here, so this  
15 would have to be in a situation where there was  
16 light from the outside. This was taken with a  
17 flash. The ambient light from the outside is not  
18 enough to illuminate this area. You really can't  
19 see very much in here just from the ambient light.  
20 So somebody had a flashlight or a shop light or  
21 something like that.

22 Q. But you don't know who it was?

23 A. No. I have no idea.

24 Q. Was there anything else, as it relates  
25 to the design of the aircraft, that impacts your

1 opinions in this case beyond what we've already  
2 talked about?

3 A. You mean as far as the routing for the  
4 cable -- the trim tab system?

5 Q. Right. What I'm doing is driving the  
6 discussion based upon your section, pages 18  
7 through 20, that speak of the complex design of the  
8 pitch control system.

9 A. No. I think we've discussed pretty  
10 much all that.

11 Q. On page 20 of your report you start a  
12 new section. It says: Role of other maintenance  
13 tasks. You start off by saying: Errors typically  
14 do not have happen in a vacuum or in isolation from  
15 the overall maintenance environment. What do you  
16 mean by that?

17 A. Well, we tend to look at individual  
18 actions that turn out to be errors as sort of  
19 happening in isolation, that somebody did this  
20 particular thing which turned out to be wrong, but  
21 the fact of the matter is that action took place in  
22 an overall environment of other tasks and other  
23 things that are going on in communication and  
24 procedures, et cetera. And so it's a mistake,  
25 actually, to look at these tasks or these actions